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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.                     | CONFIRMATION NO.       |
|--|-------------|----------------------|---|------------------------|
| 10/791,213   | 03/01/2004  | Alastair M. Reed     | P0943                                   | 3946                   |
| 23735 7590 08/03/2007<br>DIGIMARC CORPORATION<br>9405 SW GEMINI DRIVE<br>BEAVERTON, OR 97008 |             |                      | EXAMINER<br>PERUNGAVOOR, SATHYANARAYA V |                        |
|  |             |                      | ART UNIT<br>2624                        | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>08/03/2007                 | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/791,213

Applicant(s)

REED, ALASTAIR M.

Examiner

Sath V. Perungavoor

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Applicant(s) Response to Official Action***

- [1] The response filed on July 13, 2007 has been entered and made of record.

### ***Response to Arguments***

- [2] Presented arguments have been fully considered but are held unpersuasive. Examiner's response to the presented arguments follows below.

### **Claim Rejections - 35 USC § 103**

#### **Summary of Arguments:**

Regarding claim 8, applicant argues that the cited references do not disclose the "altering color values of the image by an amount to achieve change values, the amount includes a compensation for a variation in a relationship of an input color value and at least one of ink and dye provided by a printing process to represent the input color value".

Regarding claim 12, applicant argues that the cited references do not disclose the "receiving a representation of a variation in a relationship of an input color value and at least one of ink and dye provided by the printing process to represent the input color value".

#### **Examiner's Response:**

Examiner respectfully disagrees.

Regarding claim 8, Examiner contends that the cited references do disclose altering color values of the image by an amount to achieve the change values (*i.e. combining step of claim 1*), the amount includes a compensation for a variation in a relationship (*i.e. forward dot gain curve of claim 2*) of an input color value and at least one of ink and dye provided by a printing process to represent the input color value.

Regarding claim 12, Examiner contends that the cited references do disclose receiving a representation (*i.e. backward dot gain curve of claim 3*) of a variation in a relationship of an input color value and at least one of ink and dye provided by the printing process to represent the input color value”.

Accordingly, Examiner maintains the rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[3] Claims 1-5 and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daly-819 which incorporates by reference Daly-483 in view of Lawler<sup>i</sup>.

Regarding claim 1, Daly-819 meets the claim limitations, as follows:

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A method of digital watermarking an image [fig. 6] comprising: adjusting the image (*i.e.* 12-second image) in accordance with values in a first representation (*i.e.* 36-CSF) [fig. 6; col. 3, ll. 45-48; col. 4, ll. 31-40]; determining values (*i.e.* values below the visual threshold) to convey a digital watermark (*i.e.* 10-hidden image) in the adjusted image (*i.e.* 36-CSF) [fig. 6; col. 3, ll. 25-31; col. 4, ll. 59-67]; adjusting the values (*i.e.* values below the visual threshold) in accordance with a second representation (*i.e.* 46-CSF<sup>-1</sup>) [fig. 6; col. 5, ll. 1-5; col. 3, ll. 45-48] and combining (*i.e.* 18) the adjusted change values (*i.e.* 46-CSF<sup>-1</sup>) and the image to produce a digital watermarked image (*i.e.* 20-combined image) [fig. 6; col. 5, ll. 5-15].

Daly-819 does not explicitly disclose the following claim limitations:

The first and second representation being utilized by a printing process.

However, in the same field of endeavor Lawler discloses the deficient claim limitations, as follows:

A first (*i.e.* fig. 6) and second (*i.e.* fig. 7) representation being utilized by a printing process.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Daly-819 with Lawler to apply a forward and backward dot gain curve to the image, the motivation being to develop quality images by accounting for dot gain effects [page 2, col. 2, para. 4; page 4, col. 1, para. 4].

Regarding claim 2, Lawler meets the claim limitations, as follows:

The method of claim 1, wherein the first representation comprises a forward dot gain curve [fig. 6].

Regarding claim 3, Lawler meets the claim limitations, as follows:

The method of claim 2, wherein the second representation comprises a backward dot gain curve [fig. 7].

Regarding claim 4, Lawler meets the claim limitations, as follows:

The method of claim 3 wherein the backward dot gain curve comprises an inverse of the forward dot gain curve [fig. 7].

Regarding claim 5, Lawler meets the claim limitations, as follows:

The method of claim 1 wherein the printing process comprises an offset printing press [page 1, col. 2, para. 1].

Regarding claims 8-13 all claimed limitations are set forth and rejected as per discussion for claims 4 and 5.

[4] Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daly-819 which incorporates by reference Daly-483 in view of Cass<sup>ii</sup>

Regarding claims 6 and 7, Daly-819 meets the claim limitation as set forth in claim 1.

Daly-819 does not explicitly disclose the following claim limitations:

The method of claim 1 wherein the image is watermarked using a scale to black technique.

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The method of claim 1 wherein the image is watermarked using a scale to white technique.

However, in the same field of endeavor Cass discloses the deficient claim limitations, as follows:

*A method of modifying an image using a scale to black or white technique [col. 5, ll. 14-25; It acknowledged that "scale to black" or "scale to white" techniques have special meaning in the specification. However, the scope of these techniques is unclear, i.e. what steps from the specification should be imported into the claims.]*

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Daly-819 with Cass to watermark using scale to black/white techniques, the motivation being minimize human viewer response and maximize scanner response to color changes [col. 5, ll. 20-25].

### **Conclusion**

**[5] THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Contact Information***

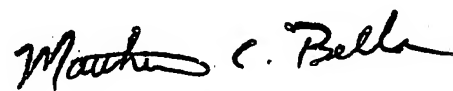
[6] Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Sath V. Perungavoor whose telephone number is (571) 272-7455. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Matthew C. Bella whose telephone number is (571) 272-7778, can be reached on Monday to Friday from 9:00am to 5:00pm. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dated: July 23, 2007

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<sup>i</sup> Know thy enemy: understanding dot gain and its effects  
<sup>ii</sup> US 6,023,525